



Math CAMPPP 2012

Summative Assessment

A process, rather than an event

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Summative assessment

“Information is used by the teacher to **summarize learning** at a given point in time. This summary is used to make judgments about the quality of student learning on the basis of established criteria, to assign a value to represent that quality, and to support the communication of information about achievement to students themselves, parents, teachers, and others.” (Growing Success, p. 31)

Things to think about

- Is summative assessment an event or a process?
- Does your summative assessment take into account the students' learning over time?
- What mathematics is assessed? Important mathematical ideas? The big understandings?
- What data is gathered and how is it put together?
- How certain are you of your judgment of what students know and can do?

The big challenge

- What data is gathered and how is it put together?
- How certain are you of your judgment of what students know and can do?

**How do we
know what
students know
and can do?**



Summative assessment – process or event?

- Performance tasks
- Conferencing with students over time
- Exams
- Portfolios

Learning over time?
How does that fit in?

What can these forms tell us?
What do they not tell us?

MathGA[↑]NS →



Portfolio assessment

As ONE example of what
summative assessment might look
like

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Why use portfolios?

- Shows growth over time
- Students take ownership for their own learning
- Includes reflective piece – develops metacognitive skills
- Different types of portfolios demonstrate different aspects of learning

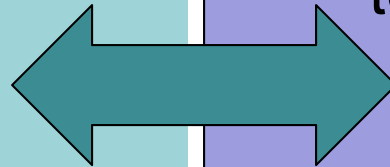
Different types of portfolio

- Working portfolio – making constant additions, refining drafts
- Showcase portfolio – the best work
- Portfolios for particular purposes:
 - Problem solving portfolio
 - Mathematical processes portfolio
 - Perspective on math
 - Learning skills portfolio

Components of a portfolio

- Samples of student work
 - Written work samples
 - Photos of models of work
 - Videos of groups working
 - Audiotapes of conferencing

- Student reflections
 - Each piece of work is accompanied by the student's reflection as to why it was included

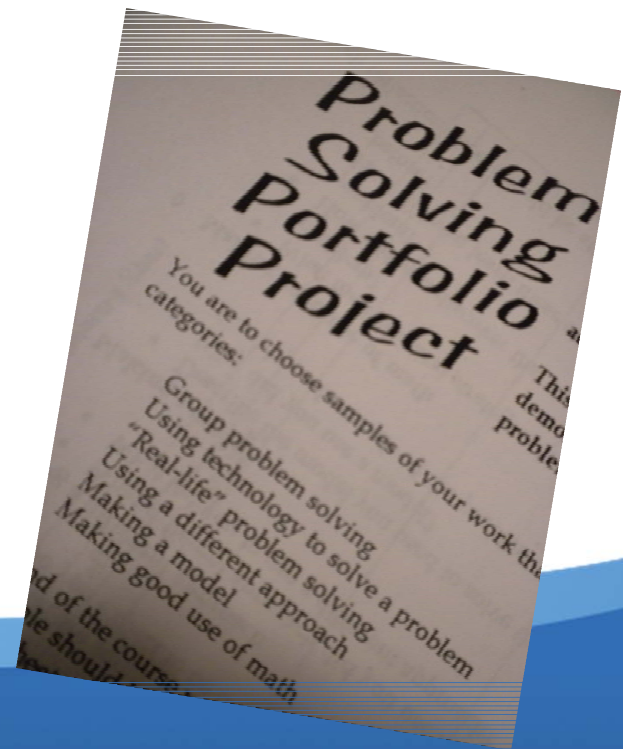


Portfolios I have used

- Empowering grade 10 – attitudes towards math
- Problem solving portfolio
- Learning skills portfolio
- Grade 1 group portfolio – problem solving
- Intermediate mathematics methods
 - (curriculum knowledge, professional knowledge, professional practice)
- Graduate course – formative assessment

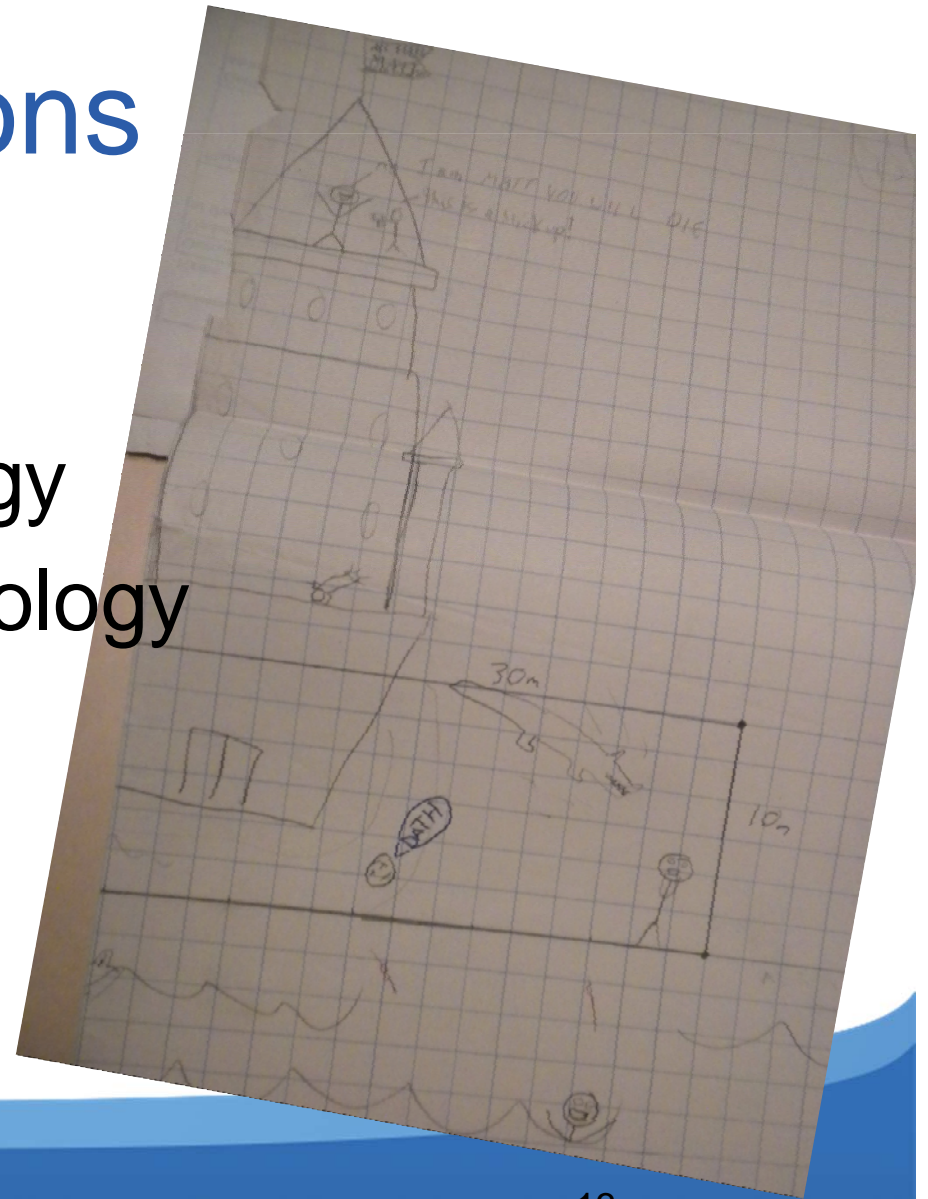
Problem solving portfolio

- Include pieces of work that demonstrate
 - Group problem solving
 - Using technology to solve a problem
 - “real-life” problem solving
 - Making a model
 - Making good use of math



Sample student reflections/solutions

- Mike – using a model
- Matt – using technology
- Simona – using technology



Grade 1 group portfolio

- Working on problem solving
- Students would discuss their work with their teacher or volunteer who would write down their reflection – this would go in to their individual portfolio
- The whole class would talk about a problem and how they solved it and determine what they would put in the portfolio treasure chest

Developing positive attitudes portfolio

- Determination
- Most valuable experience
- Why math is important
- What math means to me
- Something you are proud of
- Problem solving

Sample reflections

- Glenn – problem solving
- Don – determination
- Amy – why math is important to learn

Learning skills portfolio

- Whose learning skills are these anyway?
 - Accountability
 - Connecting learning skills to achievement
 - Developing self-assessment and metacognitive skills

Let's look at the
learning skills portfolio

Student reflections

- Monica – work habits
- Phil – work habits
- Sean – team work

Name: Phil Unit: Relationships

This reflection is to be done after a major assignment or test. Please attach this sheet to your work.

- Comment on your work habits during this unit: I think I worked pretty good during this unit because when we first started I didn't know how to do anything because of my teacher last year but when I did the test on this unit I got a 3+ meaning I learned alot because of my habits.
- How are your work habits reflected in your mark? If I didn't have good work habits I wouldn't have been able to learn the whole unit in the two weeks we worked on it, and now I have a 3+ because of my habits.
- What would you do differently next time? I would come in for extra help when I don't understand now is do instead of wait until the teacher takes it up.

Work Habits during this unit	Rarely	Sometimes	Usually	Always
Used class time in a productive way			✓	
Completed the tasks assigned			✓	
Followed through after classtime			✓	

So, how could we use portfolios as a summative assessment?

- Students could choose samples of work that illustrate
 - their understanding of the “big ideas” of the course or overall expectations in student language
 - their mathematical activity connected to the process expectations



Mathematical Processes Portfolio

- Include 2 samples of work where you
 - Used a variety of tools and strategies
 - Demonstrated your reasoning and proving
 - Represented mathematical ideas
 - Made connections to real life or to other mathematical ideas
 - Communicated well

What might a summative portfolio look like in your context?
What would be the focus of the samples of work and reflections?
How would you manage it?
How would you assess it?

DISCUSS AT YOUR TABLES

Your learning

- Think about your own experiences over the past 2 ½ days. Have you had an experience that made you think in a new way about something?
- If you were creating a portfolio, what piece of evidence would you submit?
- Write a reflection on that learning experience – what happened and how did your thinking change?

THANK YOU

